

KERAMIC STUDIO

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SYRACUSE NEW YORK

October 1903



S the time draws near for the Fall Exhibitions and later for the St. Louis Exposition, it is to be hoped that the members of the N. L. M. P. are planning a choice, rather than large collection of their work to be exhibited and that they will be strict in their judgment in regard to their own work. Since the public is always more critical than ourselves, it would be a good plan to throw out anything we do not ourselves consider quite perfect. For a sale almost anything goes, at prices to correspond, but an exhibit of a club should be dignified and show some unity of thought.

The placing of exhibits should be in charge of some one who has good taste and judgment and is unselfish, having the good of the club at heart rather than her own advancement or that of her especial friends.

Each piece should be carefully labelled on the base with name, address and price, description of piece also, if possible, for the information of judges and the press; in this way any unfairness is avoided, for if the press committee have any personal dislike to one's work and pass it by without comment, it will attract attention in spite of the indifference of individuals, if the work itself is of sufficient merit, except in case of "write-ups" by those who really have no judgment and let themselves be told what to say. Praise from such a source would be of no value, as we take it that each one would prefer to have the *real* opinion of press and public rather than see in print simply a repetition of what themselves or their friends say of the work. After all it is our own personal opinion we value most and we look at our exhibit hoping that the enemy will not put his finger on the sore spot that we have tried so hard to cover. So it is the best policy to discard all pieces with sore spots, no matter what other good points they may have, then we will be judged strictly at our best and know where we stand.

The naturalistic work should be placed together as also the conventional decorations, and plenty of space allowed—it might also add to the general good effect to have plates, cups and saucers and table ware all shown together, and the bric-a-brac separately.

For the St. Louis Exposition an individual case is of course the best arrangement for those who wish to call special attention to their work. A collection of this sort is always likely to attract the attention of the judges and has also the advantage that one cannot then complain that one's work has not been given sufficient prominence. With so much work to examine, judges naturally are inclined to pass hastily over work to which their attention is not particularly attracted.

No one should be disturbed if overlooked in an exhibit of this sort, it is after all a matter of individual opinion and another set of judges or representatives of the press might think quite differently. As long as we know that our exhibits show our best endeavor we should be satisfied to wait till we, by good fortune or hard work, strike the keynote which will force attention.

The KERAMIC STUDIO Autumn design competition closes the fifteenth of this month. A few words of warning should be

helpful to those intending to submit designs: Read *carefully* the rules before submitting. Remember that a conventional study and a *design* are two different things. Miss Mason's wild carrot supplement in KERAMIC STUDIO for August, is a study of the growth of the flower and its general characteristics—when applied to a ceramic form it would become a *design*, as in her wild carrot bowl shown in the New York Society's exhibit.

The studies are to be enclosed with a line only as a panel or plaque. The designs are to be applied to shapes. In making these studies and designs remember to apply the principles of spacing and balance as explained by Mr. Froehlich in this summer's issues of KERAMIC STUDIO.

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CHAUTAUQUA CRAFT'S VILLAGE

THE name Chautauqua has become almost a household word among the literary minded but it is a new infusion of life which is developing in this widely famed resort the movement which has resulted in the establishment of a craft's village within its walls.

Mr. Baker who is prime mover was ably seconded this year by Mr. Hugo Froehlich who had general direction of the art policy. The crafts village is as yet in a primitive state, a little group of sheds and tents, sheltering the necessary implements for furniture making, metal work, wood carving, basketry, beading, leather work, book binding, modelling and pottery. But often it is in these earlier stages of a movement that the most real enjoyment and enthusiasm is found. The teachers were all hard workers, skilled and enthusiastic and the work turned out both in quality and quantity much better than was expected on the start. Mrs. Froehlich's helpful spirit was felt in every department and her enthusiasm contributed greatly to the season's success.

The pottery, under the direction of Miss Lucy Perkins, was exceptionally individual, the native clays found about the village were very successfully used, the designs from old pots and jars, mostly Indian in character, being particularly suited to the medium. Mr. Walrath who was in charge of the wheel work, kiln and glazes, turned out some fine glaze effects. Mrs. Vance Phillips also was an enthusiastic worker in the little shed which constituted the pottery—in fact, this department owes much to Mrs. Phillip's energy. The year's work altogether augurs well for coming success.

* *

Both pottery and porcelain, are produced from clay. But there is a distinction and difference in clays. What we usually denominate pottery denotes, first, objects made of minerals (generally clay) which is molded while soft and then baked until it becomes hard; second, a place where such objects are produced; third, the art and process of their manufacture. In a narrower and more customary sense, the word pottery is applied only to the coarser varieties of such objects; porcelain comprising the finer, translucent, or semi-translucent kinds. The clay which forms the chief ingredient of porcelain is kaolin. Kaolin is found in abundance in many places. Greenland, England, and many of the Southern States. It is found in great quantities in China, and its name is said to be derived from a hill near King-tih-chin named kao-ling, or "lofty bridge."



FLEUR-DE-LIS—NELLIE SHELDON

LAY in the background blending softly, the dark gray at the top, through a touch of Lemon Yellow, to the soft grey at the bottom. While the background is open, wipe out the flowers and most prominent leaves. Model the flowers very simply in the gray, the leaves and buds in Royal Brown

and Shading Greens, with a touch of Meissen, dragging a little of the background color over the edges of the leaves and petals.

Second fire.—Go over the background with the same colors as used before. Strengthen the flowers and leaves which are most prominent leaving the others in the background.

A very thin wash of Lemon Yellow over the lower petals and a strong touch of Yellow Brown, Dark Brown on the tufts with the little lines in Royal Green.

Keep the edges very soft and let the restful effect of the grays be the most prominent feature of the study.

For the light gray use Rose, Ivory Yellow, Deep Blue Green and Dark Green. Dark gray, Ruby, Yellow Green, Dark Green, Deep Blue Green.

* * BASKETRY

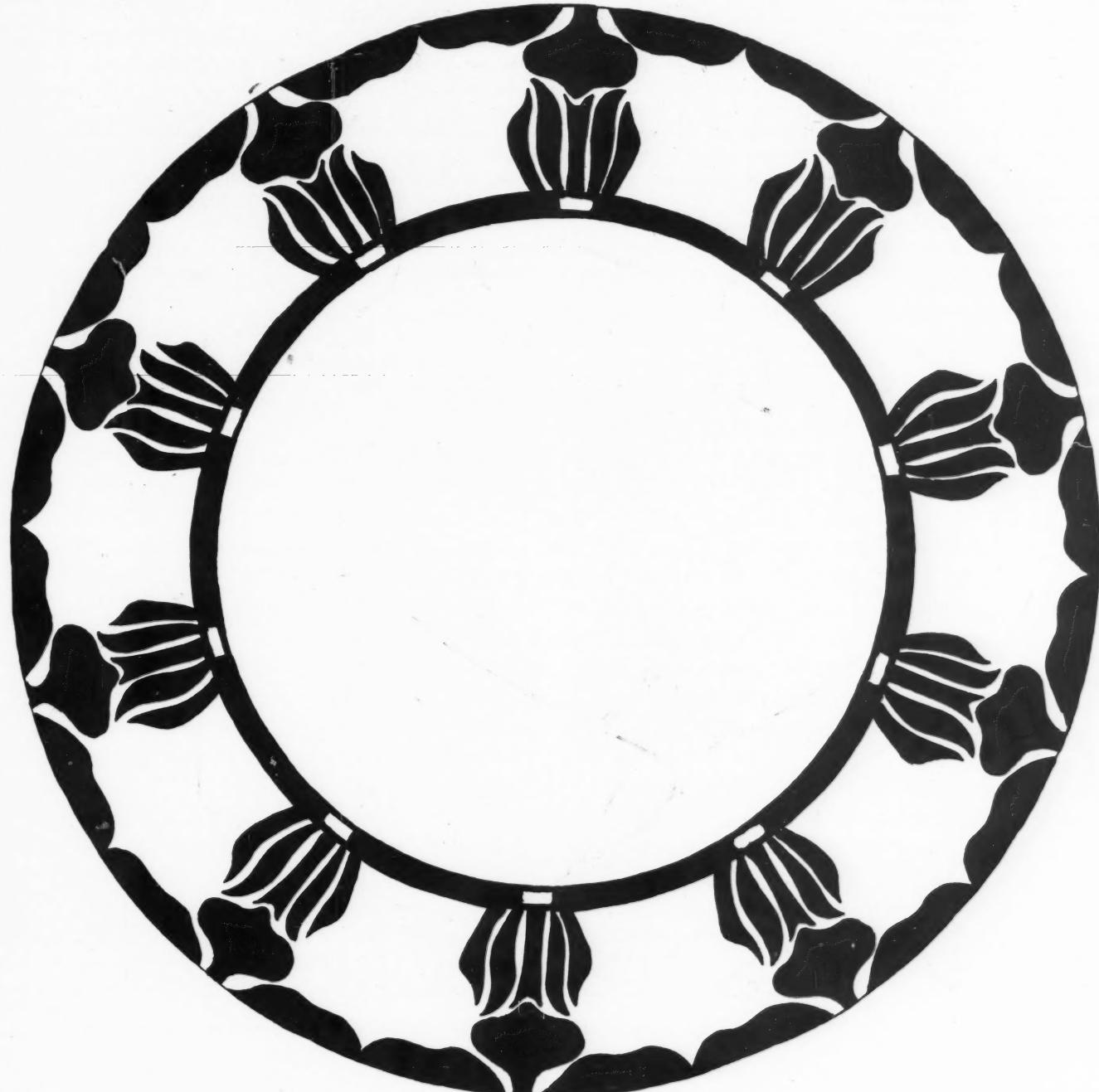
Mrs. Hugo Froehlich's article on Basketry, is unavoidably postponed until the November number.

TREATMENT FOR MARIGOLD (Page 130)

Lucia A. Soule

THIS flower is found in several varieties, the most usual being a deep yellow or a warm mahogany red with yellow under side of petal. For a conventional treatment several combinations are suggested.

1. Mahogany Red petals; underside Pale Ochre, leaves and stems, Grey Green.
2. White petals, Grey Green underside, and leaves and stems a darker Green.
3. Petals a Purplish Blue, underside Pale Apple Green, leaves and stems a rich Dark Green.
4. Petals, Yellow Brown, underside Cream, leaves and stems, Brown.



DESIGN FOR PLATE—CATHARINE SINCLAIR

This design is carried out in one color, Delft Blue (Lacroix). After the first painting dry very thoroughly in oven. A second painting will make a desirable shade and do away with two firings.

KERAMIC STUDIO

GRAND FEU CERAMICS

V—The Making of Ceramic Shapes—Gres and Porcelain
Throwing and Pressing.



THE handling of grès, and especially of porcelain, presents difficulties, which can be solved only by practice or with the help of a clever artisan. Pieces can be made by three different processes: *Throwing* and *pressing* for grès, to which should be added *casting* for porcelain. None of the details of this work must be neglected, as an omission or lack of attention may absolutely ruin the finished piece, although there may be nothing, before its passage through the fire, to show that it contains a destructive flaw, no more than a flaw can be detected in a steel bar before it breaks.

However one should not exaggerate these difficulties, as the mind gradually and easily gets used to the many precautions which must be taken during the handling of a piece.

When I commenced my experiments, I did not know how to throw, and I first learned to use the wheel.

Beating—When the soft paste has been taken out of the plaster basin it is necessary to beat it, in order to make it thoroughly homogeneous and to expel all the air bubbles, which may have been introduced during the first operations. In a ceramic body, the forgotten air bubble causes during firing a blister or a pin hole.

Formerly in factories the paste was beaten with naked feet, and now the work is done by machinery. As machinery is unnecessary for small quantities, one should beat the paste, as I do, with the hands.

The paste is divided into balls or masses of 15 to 20 centimeters (6 to 8 inches) according to the muscular strength of the operator. Then the ball is cut in two, either with a brass knife, or better, with a fine copper thread such as is used to cut butter (fig. 2). The detached part is lifted with both hands to the height of the arm and thrown violently on the other part, so that the two masses will penetrate each other. In order to increase this penetration, one strikes a few successive blows with the hands on the sides of the mass. This operation is repeated about twenty times, care being taken every time to oppose the sections to each other, until, when opening the mass, no air bubble can be detected.

During the beating, the hands must be kept, not wet, but damp, to avoid the formation of crust from the heat of the hand.

The beating of paste may be done, for grès, on a plaster slab 3 inches thick, and for porcelain it should be done on a slab of slightly porous stone, about 2 inches thick.

The slab I use is 25 inches long by 27 wide. Its surface is very smooth. It is solidly fixed on one side in the wall, and supported on the two other sides by a casing of bricks, laid flat, so as to insure their absolute fixity. The fourth side, or front, is open to leave free movement to the beater.

This paste bench must be kept very clean and carefully cleansed when one uses it for porcelain after grès.

Throwing—Throwing comprises *throwing proper* and *turning or finishing*. The tool to use is the antique potter's wheel. It is made of a vertical shaft turning in a cup fixed on the floor, the upper part being held by a collar. On top is screwed a plaster cap on the flat side of which the thrower places the paste. This cap is called the wheel top. Near the

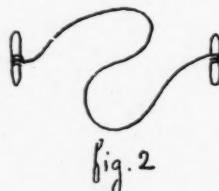


fig. 2

base of the shaft is a large balance wheel, which the thrower pushes with the right foot to keep it revolving.

Everybody knows the potter's wheel. There are some in all cities in the world and it should be easy to all to become familiar with its working.

Throwing—To throw a piece, the thrower places near his hands an earthenware basin filled with a clear paste called slip. He puts the wheel in motion, throws with his right hand some slip on the wheel top, slides on that slip a plaster disc $\frac{1}{8}$ -inch thick, putting it exactly in the center, being sure that its center coincides with that of the wheel top, and this fixes it. As soon as the water of the slip is absorbed by the plaster, the disc will be fixed by itself and will form a solid basis. Then the disc is also covered with slip, in the midst of which the ball of paste is thrown and fixed.

Taking the mass of paste between the hands which he must keep constantly wet with slip, the thrower alternately raises and lowers it, pressing it between his hands, then between his fingers, pushing the thumbs into the center of the mass and opposing them to the fingers which are pressing on the outside. Sometimes with an effort, other times by a slight touch of the hands, he gives to the paste a heavy and thick shape, following as closely as possible the curves of the shape to be made.[†]

In the study of throwing the most difficult thing to master is the centering of a piece, which consists in making the center of the thrown piece exactly coincide with the center of the wheel top, so that there will be a synchronism of rotation of both. It took me three months and a good deal of patience to master this necessary detail. I advise to practice first with a plaster disc and successively with heavier and more important pieces. This point acquired the rest is nothing but an attractive play.*

Closed pieces, those with narrow necks, are thrown in two pieces, which after the finishing are put together and fastened with slip. This operation must be done rapidly and with precision.

Throwing is the most important part of the making on the wheel of a ceramic piece and its success depends entirely on the care with which it is done. Brongniart, in his excellent "Traité de Ceramique" mentions all the precautions which must be taken. It would be too long to go over them in detail in these articles. The thrower will become familiar with them by practice. I will simply say that the less plastic a clay is, the thicker it must be thrown, and that it takes many years of practice to become a clever thrower.

Turning—When the thrown piece is firm, but not dry, it is placed again on the wheel and glued with slip. Then it is perfected with turning tools. These instruments (fig. 3) are steel plates, sharpened on the edges with a file, straight or curved, solidly fixed in a wooden handle and perpendicular to the angle of the handle. With these different turning tools the thrower perfects all the curves of the vase, keeping as closely as possible to the design which he has under his eyes.

The piece is then subjected to the finishing process.

This consists in applying to the piece turned a steel blade with sharp edges, which has been cut with a file into

[†] [The plaster disc holding the shape is then cut from wheel head with a wire.—Ed.]

* [By pressing the paste firmly between the palms with thumbs over top and holding steadily until it no longer "wobbles" the clay will quickly center itself—the main thing is not to allow the hands to move from this fixed position until no motion is felt but the circling one.—Ed.]

the exact inside or outside outline of the model (fig. 4). The sharp edge of the steel removes the remaining excess of paste. This done the piece will be finished completely by polishing it with the angle of a horn leaf or with a wet sponge.

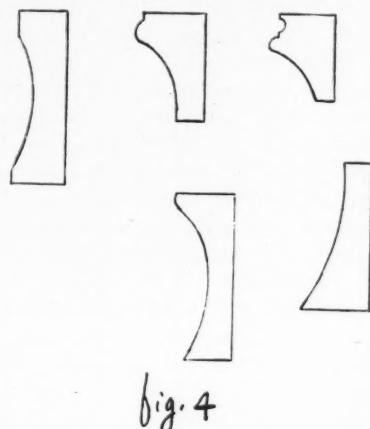


fig. 4

Pressing—Pressing is the mode of fabrication by which the soft, but well beaten and homogeneous paste, is vigorously pressed with the thumb inside of a plaster mould representing in hollow the shape which one wishes to make. It is important to put everywhere an even coat of paste, whether it is put in small flat pieces or rolls. One must also with a wooden chisel indent with light furrows the two parts which must be joined, and in order to obtain a perfect adhesion, the edges of all the joined pieces should be wet with slip. Without this precaution there would not be adhesion of all the parts of paste successively applied in the mould, and cracks in firing would result.

The pressing done, and after the paste has become firm, the piece is taken out of the mould. The drying should be slow and even to avoid warping. Grès requires more care in this operation than porcelain. Grès is placed on laths (fig. 5), made of wooden slats, so that the circulation of air will act on all sides. To do otherwise would be to take the risk of cracks and warping which would disastrously increase in the firing.

The pressing process makes possible the execution in grès and porcelain of large pieces, in which the carving in high and low relief constitutes the main decorative element.

The drying and the firing of these large pieces are not without danger because of the shrinkage, this nightmare of the ceramist. To diminish this risk, it is well to mix with the paste, in the proportion of 20 to 25% a material, which, having already shrunken, will help reduce the total shrinkage. This material is a powder made of the same grès, fired and pulverised. (Called "grog" by potters. Ed.) With the help of this admixture Chaplet has executed plaques three feet in diameter, giving 2 feet 7 inches after firing. With the same process Bigot has successfully carried out a series of grès bath tubs made in one piece, and Jeanneney made in 1900 two enormous chimeras 3 feet 11 inches high. The high relief medallion which figured in the architectural fragment exhibited by Sèvres in 1900 had 5 feet 3 inches diameter, was 25 inches in the thickest part of the relief and was made of this prepared clay.

As a certain number of pieces cannot be made in one block, they are made in parts, and the joining and adjusting of these parts is called cementing.

In order to make a good cementing, the constituent parts

of the piece should be put together dry, and when the adjusting has been well determined, furrows or hatching are scratched on both surfaces to be joined, they are wetted with gum water and covered with a thin coat of slip, then it is cemented. Slip catches quickly and it is necessary to do the work promptly.

To render the cementing easier, its drying should be slow. This result is obtained by mixing with the slip a little gum arabic.

I do not think it necessary to go into more details for this part of the fabrication, as the makers of faience and common pottery are familiar with all its phases and can be referred to. Processes are the same with the new materials, but will require more care.

* * *

THE SUMMER SCHOOL OF CLAY WORKING AT ALFRED, N. Y.

A MORE ideal spot than Alfred for the student of pottery can hardly be imagined. The atmosphere, physical and spiritual is most stimulating. The high hills, the bracing air, the peace and quiet, the large airy class rooms, every convenience for work right at hand and always some one to consult in a difficulty—what more could one want? The opportunity to do one's own work under the most favorable environments and a helping hand when necessary. The ceramic worker is immediately raised to a higher plane than the old familiar one of watching some one else do one's work, and the satisfaction of discovering one's own power of expression is worth a thousand "pieces to take home."

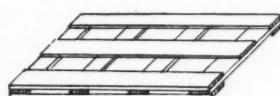


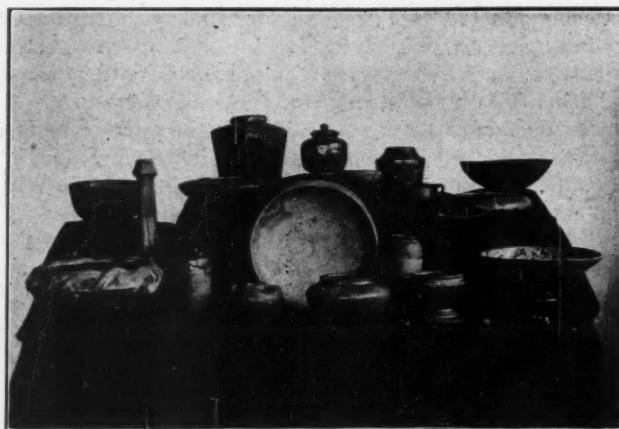
fig 5



BUILT WARE IN MATT GLAZES, ALFRED SCHOOL.

That more students take advantage of this rare opportunity every year goes without saying, the success of the school is assured. Many overglaze workers of reputation are here to add new lustre to their names. Several different bodies were supplied, both white and colored, for the various processes of casting, throwing and building by hand, and glazes both matt and clear; while the student was guided in the mixing of his own materials, every possible convenience was provided both in laboratory work and in the mechanical processes, while Mr. Binns and his able assistants were always on hand to consult.

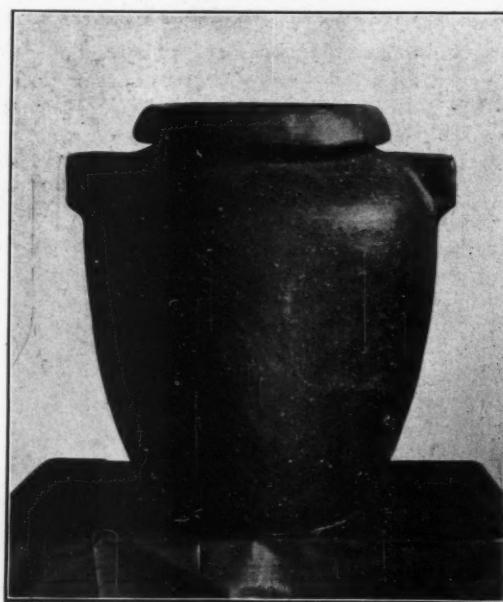
In Mr. Binns' laboratory classes thorough technical instruction was given in the composition of bodies, glazes and colors and the students worked out not only the problems given them but discovered many interesting mixtures which produced unique and original results. The forms designed this year show a steady artistic evolution. The Japanese influence produced many fine shapes of tea jars in thrown and cast



*BUILT WARE IN MATT GLAZES, ALFRED SCHOOL.

pieces and the Indian forms influenced much of the building by hand..

Mr. Fry's class in design was full of enthusiasm and many interesting originals were executed both over glaze and on a plate made at the school with a fine crackle glaze especially for this purpose. Later we will give an illustrated article on this class. Mr. Fry himself spent all his spare moments working in clay, with most interesting results.



GARDEN VASE—MARSHAL FRY.

Altogether the Alfred school is to be highly commended, there are, we believe but two other State schools provided with such facilities in the United States. This one has the advantage of being open for the summer season to those who cannot take the winter for study but can spend a vacation advantageously here and help the good work on.

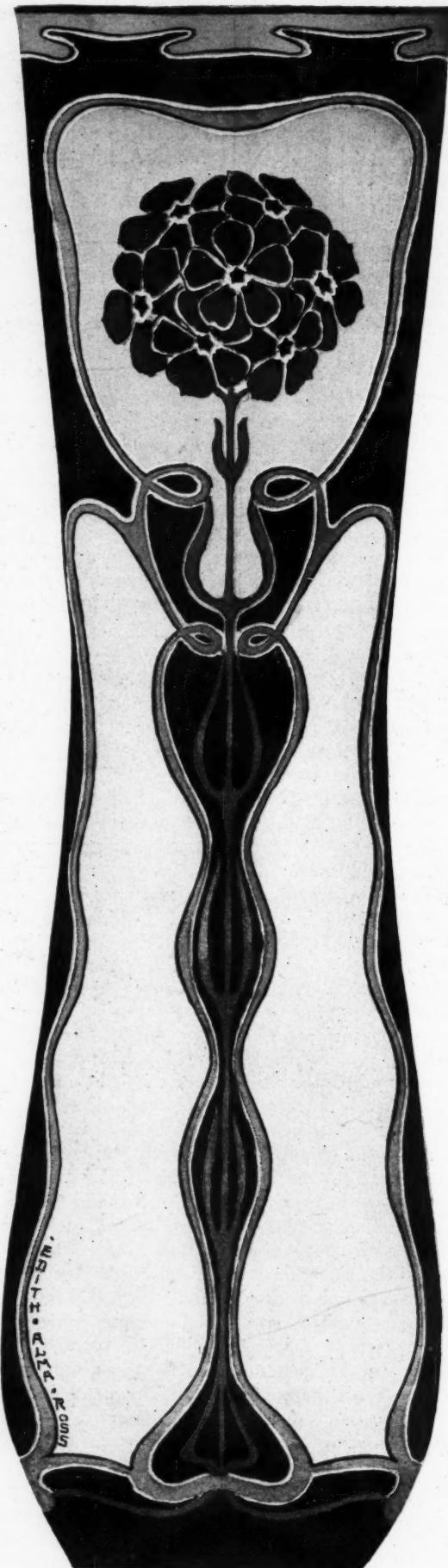
*Title under cut on previous page should be "Group of Tea Jars in Japanese Style."



TREATMENT FOR PHLOX

Edith Alma Ross

THIS design is to be executed in three shades of reddish violet, grey green and gold. Other color schemes are effective, especially grey, grey green and two shades of grey blue:



PRINCIPLES OF DESIGN

(Fifth Article)

Hugo Froehlich



In the July number of the KERAMIC STUDIO the meaning of the term *value* was defined as the comparative light or dark note that an object or space makes against its surroundings. For instance, a tree may in its entire shape be lighter or darker than the meadow against which it is seen. A vase may appear as a lighter or darker shape

against a background. This lighter or darker quality is termed the value of the object and may be very slight, as the difference between two light greys, or it may be strongly pronounced as the value of a white object against a black ground.

For the sake of a good working basis we may divide the gradation from white to black into a *value scale* of nine steps, viz: No. 1 is white; No. 2, High Light, etc. This is a division made by Dr. Denman Ross of Harvard and is purely arbitrary. It is a convenient arrangement for the student and has the further advantage of corresponding to the color circle of full intensity. Of this color phase, however, more will be said in the future.

On analyzing this *value scale* we find that the grey which is just half way between white and black is called *middle*; and again half-way between white and middle is called *light*; while half-way between middle and black is called *dark*.

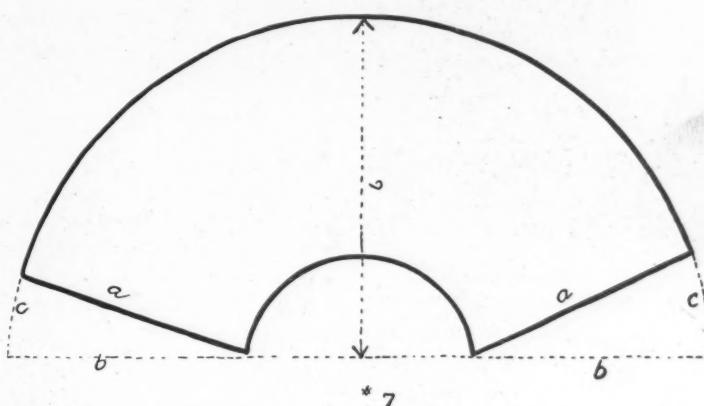
One step above *light* is *high light*; while one step below *light* is *low light*.

On the lower half of the scale one step above *dark* is *high dark* and one step below *dark* is *low dark*.

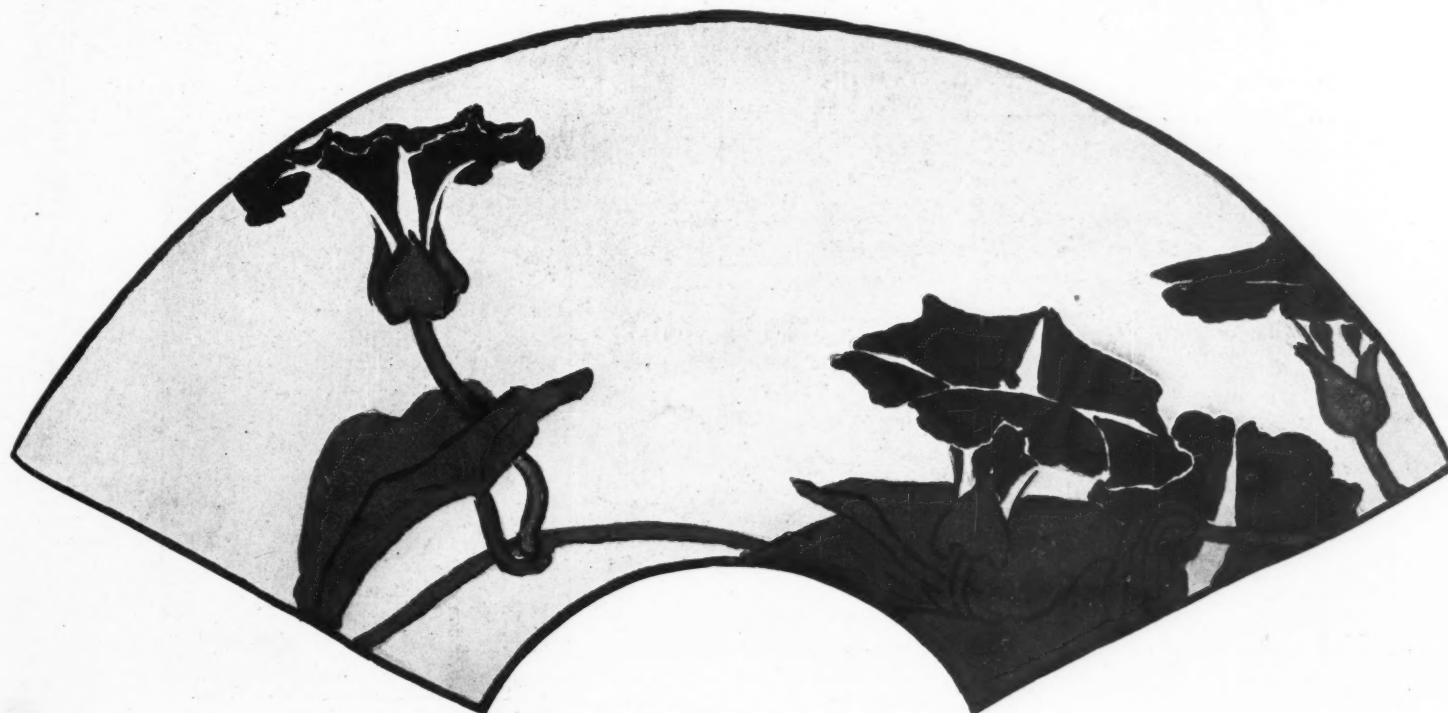
Try to learn this arrangement so that in referring to these terms you may readily understand their meaning. Roughly speaking everything about us will have a value almost coinciding with some note of this scale. If now we play on, say three notes above the *middle* or on three notes below the *middle*, we

are more apt to get harmonious results than if we play on notes that are widely separated, such as *white*, *middle* and *black*. I have given you in a previous lesson pure black or white because the terms (black and white) were limited. I wanted you to feel that a certain quantity of black would balance a certain quantity of white. If I had given you three greys of little difference in values you would not have realized this balancing quality in a large measure, hence the black and white spotting of a rectangle and border of the clover and Swastika motives. In the present lesson, however, we may try some of the more

Problem II



subtle and harmonious arrangements. Harmonious here means likeness, viz:—if two or more objects, shapes or lines are like, there will be perfect harmony among them, if they have some elements of likeness there will be a tendency toward harmony. This is what is meant by shapes being related. In previous lessons the necessity of shapes or areas being related (harmony) has been emphasized as one condition of beauty. It has been stated further that this harmony may lie in the contour of an area (line or shape) in the value of the area or in the color of the same.



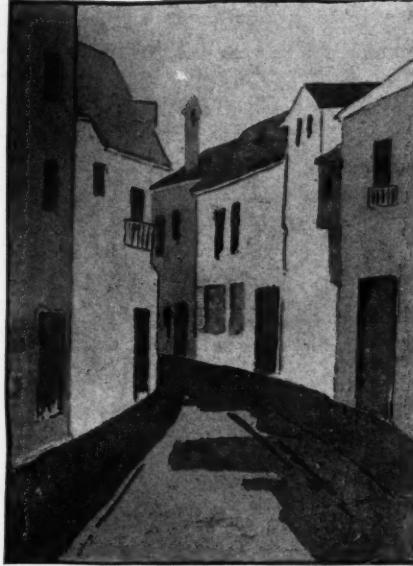
SOLUTION OF PROBLEM II BY A PUPIL.

KERAMIC STUDIO



Problem I-No. 2.

W.
H. L.
L. L.



Problem I-No. 3.

White
W.

High
Light
H. L.



Once acquired they are first a direct aid in observing that kind of beauty in nature and works of art, and secondly a logical mode of procedure in creating beauty. For anyone who can produce beauty of tone in these similar examples will never produce anything that is thin, washed out, colorless.

Compose the given landscape in rectangle 4 inch one side (the other dimensions to be determined by the student). Look for consistency of line movement and relation in all of the shapes.

Make the three large—avoid putting in too much sky. Do not be afraid to cut across parts of the landscape. An easy way to proceed would be to make a good size drawing in outline, then cut out of a piece of paper a rectangle one side of which is 4. Slip this rectangle over the



Problem I-No. 4.

This scale of color is all a half-tone lower than intended owing to the half-tone process.



Problem I-No. 5.

W.
L.
M.

B.
M.
H. D.

sketch until a fine arrangement is discovered, then copy the picture that is seen in the rectangle. Make four copies in pencil outline on some white paper (Japanese paper is preferred if it can be obtained, as its splendid working qualities are superior to other material).

These four copies are to be the same arrangement of landscape in four rectangles of same size similar to Nos. 2-3-4 and 5. Select three values from the value chart No. 1—above the middle these three values are to be the instrument for the first two sketches. Select a second instrument of three steps below the middle of the value chart for the second two sketches. Mix these grey values in separate saucers by using charcoal grey water color or any water color black pigment. Try to match the grays of the instrument; then paint in the shapes of the landscape similar to sketches 2-3-4 and 5. The gray tones in the landscape ought to be perfectly flat if the work has been done correctly.

Make two fan shapes by drawing a semi-circle whose radius is 6, the smaller circle to be determined by the student. Draw the lines a a and erase the lines b c. To make a fan shape whose proportion shall be fine requires judgment and such training as the previous lessons have given. Next step



Problem II *8

is to compose in a big way some flower motive so that we have main mass, secondary masses; so that the lines or contours of these masses and the movement of the stems shall be related to or in harmony with the structural lines of the fan, which in this case are the two segments of the circles and the two ends of the fan. Try for the unusual in beauty, as any work that is no better than that of average ability comes dangerously near the commonplace. It must have something of ourselves, our personality, in its expression. It ought to carry with it a delightful surprise. The composition in both fans may be alike but they are to be spotted in different ways by playing on the following instrument.

By spotting them in different ways is meant that if in the first fan the flowers are of the light value, they may be of the middle value in the second, and if the background in the first fan is dark it may be light in the second, etc. Be sure to lay the gray values absolutely flat as that insures a refinement and excellence totally lacking in an uneven wash. The work as in the landscape problem may be done on white paper, however, the Japanese paper is preferable and ought to be mounted on a card board to insure the best results.

The object of the lesson is to further emphasize arrangement of parts in a given space, to develop consistency or rhythmic movement, to acquire a richer expression in values and consequently of colors, as value study is the foundation of color.



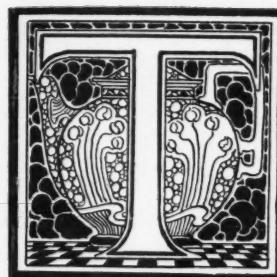
RATTLESNAKE
ORCHID
M. V. THAYER
Treatment Page 133



MARIGOLD—LUCIA A. SOULE (Treatment page 123)

CLAY IN THE STUDIO

(Tenth Paper.)

Charles F. Binns

HE time has now arrived for the consideration of the problems of glazing and it is a matter for serious consideration how to put the necessary information before those who, presumably, have had no scientific training. All things considered it will perhaps be best to revert to the empirical way of doing things. This is not the best teaching we admit but it affords the shortest path to results and if more is wanted some systematic instruction must be sought.

The ordinary glazes available for the studio will be such as can be mixed from materials which can be readily procured and which need no preparation. A glaze is a compound of fusible and infusible materials so balanced that at the right temperature the mass will melt and flow. The term "fusible" is, of course, relative. None of these substances is actually infusible but is so at ordinary temperature. Others again are very hard to melt when alone but fuse readily when certain other ingredients are present. For glazes so compounded the all-important substance is lead. White lead is generally used because it can be readily worked up in water but red lead would do the work. White lead supplies a base with which the other ingredients of the glaze freely combine and hence it forms an indispensable constituent of simple glazes.

For a lead glaze to fuse at cone 1, on the body already given there would be taken

White lead	73 parts by weight
Kaolin	8
Flint	19—100

This will give a very soft glaze, yellowish in color and somewhat inclined to craze on certain bodies. In order to harden or stiffen the glaze some of the lead may be left out and whiting or paris white substituted

White lead	62
Paris White	11
Kaolin	8
Flint	19—100

This glaze will also be whiter than the first and less liable to craze.

A still better glaze can be made by the introduction of zinc oxide but this must be added sparingly as it will impair the brilliancy of the glaze if used in excess. Zinc makes the glaze whiter and somewhat stiffer

White lead	54
Paris white	13
Zinc oxide	6
Kaolin	8
Flint	19—100

Yet another change may be given and as it will involve an entire change of proportions an explanation will be advisable. It is well known that the use of the materials which nature has provided is advantageous to the potter. Rocks and minerals are found which are already in a fused and glass-like condition and such substances are of the greatest use to the glaze maker. Many of these natural products are colored, they contain oxides of iron and manganese which are undesirable in water-white glazes, but feldspar is an exception. This has already been mentioned as an important constituent of the body mixture and it is also available for glazes. But the addition of feldspar necessitates a re-arrangement of the glaze by reason

of the fact that it is a complex substance. It contains potash, alumina and silica and would cause an excess of these were not the alumina and silica derived from clay and flint proportionately lowered.

The mixture will now read

White lead	50
Paris white	8
Zinc oxide	6
Feldspar	20
Flint	16—100

enough alumina being present in the feldspar the kaolin has been entirely omitted while the potash which the feldspar contains has displaced some of the lead and paris white.

One of these four glazes will probably answer the purpose of any one who is working at a low temperature but if it should be desired to make a change the lines upon which this should be done will be indicated. The important ingredients for stiffening are clay and flint, either one alone will not answer the purpose, they must be increased together and proportionately, the increase of the flint being double that of the clay. Thus in glaze No. 3 a harder mixture will be secured by increasing the clay to 9 and the flint to 21 parts and harder yet by making the clay 10 and the flint 23. This action may also be taken if a glaze is found to craze. The silica in clay and flint checks the crazing and the alumina prevents the silica having a bad effect upon the brilliancy of the glaze. At the same time these additions must inevitably make the glaze less fusible so that a stronger fire is necessary to secure maturity.

The materials may be secured from any dealer in chemicals and are usually found to be sufficiently pure. The kaolin, flint and feldspar which have been used in mixing the body are quite suitable.

The weighing being completed the whole mixture is put into a mortar and thoroughly ground. When all the lumps are broken down water should be added to produce a very thick batter, thin enough to flow down the sides of the mortar but no more. This must be again thoroughly ground to secure a perfect incorporation with the water. The worker on a large scale simply puts the whole batch into a mill and thus accomplishes what the less favored must do by hand. Labor must not be grudged at this point and let it be a consolation to know that the finest effects of the Japanese and Chinese potters are produced with hand-ground mixtures.

A fine sieve should now be brought into requisition and the glaze mixture thinned with more water poured on to it. Small clay lumps may be rubbed through but any grit must be rejected.

There are several ways of glazing pottery but only two in general practice. These are dipping and spraying. The latter need not be explained in detail as it involves the use of compressed air, the former is practised on two lines, porous ware dipped in thin glaze and non-porous in thick glaze. The former is the general factory method and is the more rapid but unless there be a large tubful of glaze it is impracticable. The porosity of the body renders a very rapid action necessary or too large a bulk of glaze will be taken up. Such rapid action is the outcome of long practice and is not to be attained without.

The non-porous ware then offers virtually the only possible course in the studio. To secure this condition every piece of ware to be glazed must be soaked in clean water until it has taken up all it will hold. The glaze must be of the thickness of good cream. So thick that when the finger is dipped into it a good white coating remains on withdrawal. It must be such a coating that cannot be shaken off. If the irregularities of the skin show through the glaze on shaking the finger the mixture is too thin. If left to stand for half an hour a

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little clear water will be found on the surface and this can be poured away. While the pottery is being soaked let everything be got ready. All the preparations for drying should be made in advance. A small board on which to place the dipped ware, several stilts of different sizes so that the wet piece may not touch the board itself. An open window is a good place to dry on a fine day and the window sill should be cleared in readiness.

The glaze made of the proper consistency is contained in a bowl, an ordinary kitchen bowl is good, not too flat on the bottom because the glaze will not be deep enough, wide at the top that the pottery being glazed may be kept from contact with the edge. The bowl should stand on a low table, have the height so that one can work without stooping and yet have the work at arms length.

Now for the pottery. It is taken out of the water and set to drain. Then with a clean cloth every vestige of moisture is removed from the surface. It should be saturated but not wet, not even moist. The feeling it should have is like that of a brick after a shower of rain. If any moisture remains on the surface the glaze will run down in streaks. As each piece is taken up the best method of handling it should be considered. The fewer points of contact with the fingers the better. Small vases and jars may be held between finger and thumb, finger on the top, thumb beneath. Practice holding a piece so, and set it down on a stilt so as to release the bottom as it touches the support and to steady it with one finger only. It is surprising how even large pieces can be manipulated with just a single touch. The jar or vase being conveniently held is taken in one

hand and using the other hand as a scoop the glaze is ladled up and poured over the piece. As each handful is poured the piece should be shaken so as to throw off superfluous glaze and secure an even coating. It is sometimes easier to glaze the inside first, filling up the piece with glaze and pouring it out. Now when the whole has been evenly covered it may be set down carefully in the appointed place and left to dry.

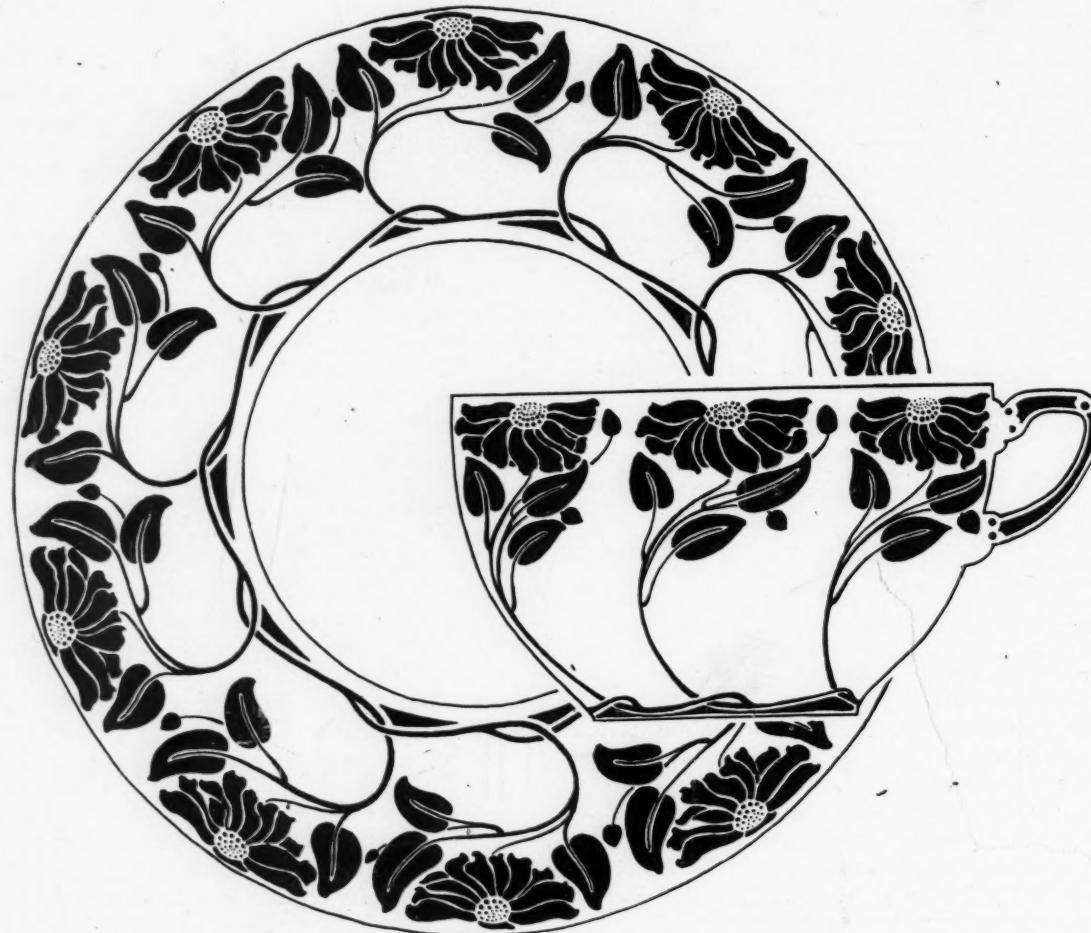
When dry a test of thickness may be made by scratching the glaze with a pin. It is impossible to say what the scratch should look like but if every batch of work is thus tested a standard will very soon be reached by experience. The glaze when dry should be of the thickness of good writing paper. The scratch will heal over in the burning. When dry the pottery should be carefully lifted and the glaze at the bottom dusted off with a piece of cloth or sponged. This will prevent any adherence to the supports in the kiln.

CHOCOLATE POT AND CUP AND SAUCER

Russell Goodwin

ROUND, cream tint, flowers, yellow brown, centers, leaves, stems and buds a medium light brown or olive green. Can be executed with or without outlines.

This design is effective in two shades of grey blue or blue and green on white or a grey tint, or it can be carried out in different shades of gold on a cream tint. The gold can be covered with lustre for second fire. If desired black outlines can be used.



CUP AND SAUCER—RUSSELL GOODWIN



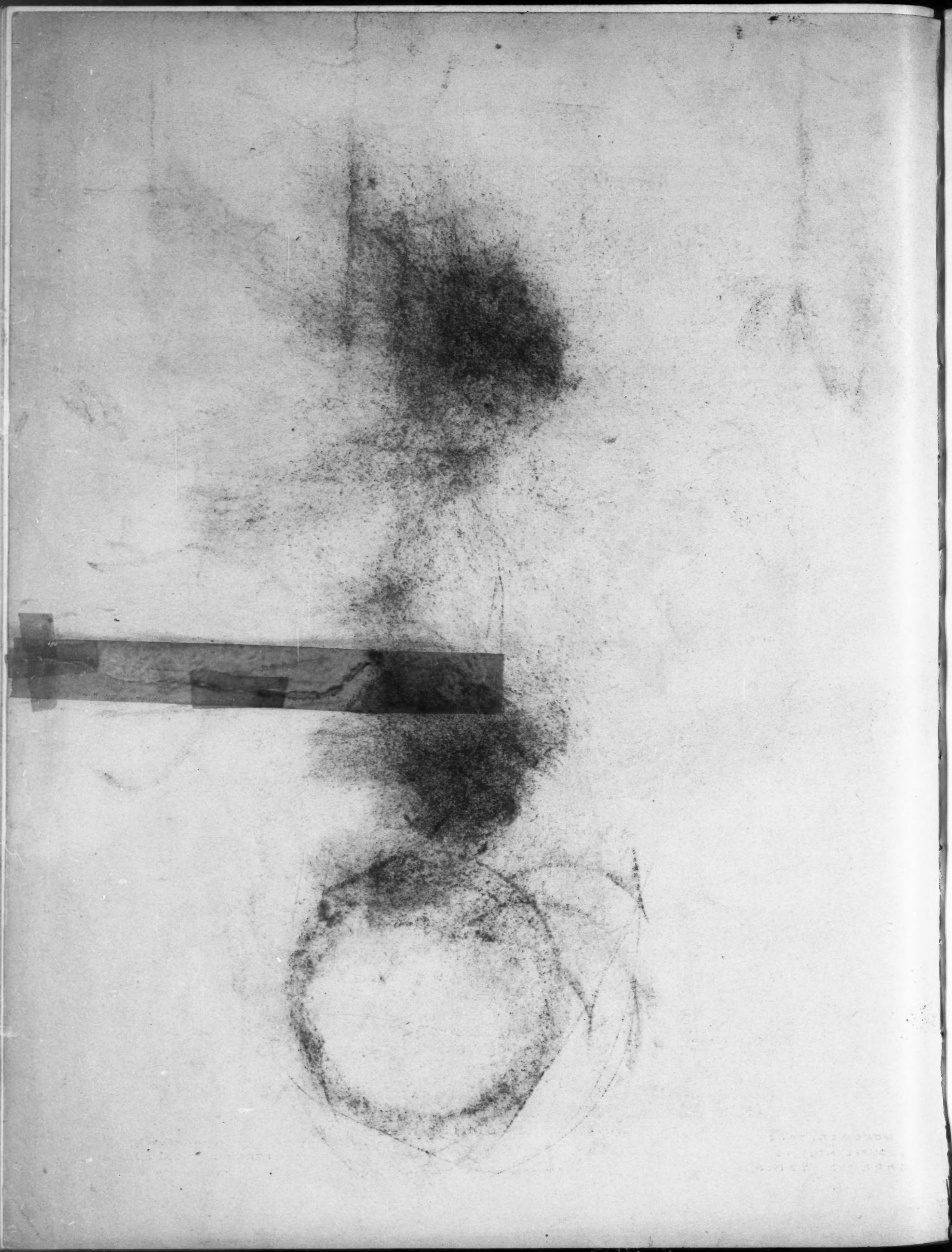
CRAB APPLES—LOUISE BLAKENEY

OCTOBER, 1903
SUPPLEMENT TO
KERAMIC STUDIO

1903 Oct.

PHOTO-CHROMOTYPE ENG. CO., PHILA.

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TREATMENT FOR CRAB APPLES (Supplement)

Louise Blakeney

FOR the apples, use Lemon Yellow, Yellow Brown, Yellow Red, Finishing Brown; Copenhagen Blue for greyish blue. Use Albert Yellow and Yellow Brown for reflected lights keeping them brave and brilliant. For second and third painting deepen the shades with Yellow Brown and Finishing Brown, accenting with Auburn Brown for pips and about stems. Wipe out high lights in first painting, putting a touch of blue or blue violet close against high light, thus making it more brilliant.

For the leaves use Apple Green and a bit of Copenhagen Blue, thinly for light parts, Moss Green for yellower parts, Brown Green for deeper shades with accents of Dark Green. For stems use Copenhagen Blue for light greyish parts, deepening with Finishing Brown, accenting in second or third firing

with Auburn Brown and Violet of Iron. For background use Yellow Red, Blood Red and Violet of Iron running into greys; Finishing Brown used lightly and Copenhagen Blue.

The reddish and shadow leaves are put in with Violet of Iron, Yellow Brown and Moss Green.



RATTLESNAKE ORCHID (Page 129)

M. V. Thayer

THE rattlesnake orchid is quite as attractive in its winter form as in the summer flower. The compact spikes of dull white flowers have given place to graceful stalks of balloon like pods which are ribbed and lined like tiny umbrellas. The color is a light husk brown with red brown lines and shadings. The leaves keep all winter the fresh dark blue green color with the ribs of white sharply marked.



CHOCOLATE POT—RUSSELL GOODWIN

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MARIPOSA LILY—MRS. E. L. HUBBERT



SOME OVERGLAZE DECORATIONS FROM THE CHAUTAUQUA STUDIO OF MRS. VANCE PHILLIPS.

CHAUTAUQUA STUDIO OF MRS. VANCE PHILLIPS

SUCH an attractive studio as that of Mrs. Phillips at Chautauqua is seldom seen. The rooms are large and airy, the windows are many and picturesque, shaded with vines or screened with awnings and the presiding geniuses are always bright and cheery. The spacious tables arranged for work, the finished pieces about the room, the flowers here and there, all create an atmosphere most attractive to china decorators in particular and every one else in general.

There is no doubt that Mrs. Phillips' figure work on porcelain is better known than almost any other, and always finds enthusiastic followers as here at Chautauqua and her enthusiasm in pottery work has greatly helped this department in the crafts village, where she takes many of her pupils to initiate them into the mysteries of the potter's art.

Mrs. Safford, who directs the decorative work and flower painting, has found some charming new effects this year in a semi-conventional treatment of roses, poppies or other flowers arranged about tall pieces with the stems running to the base here and there—not a mass or confusion of flowers but a few roses with their stiff thorny stems suggested or a few bright poppies with a shadowy suggestion of others in the background. Her panels in violets are charming and we note with pleasure that much of her flower painting is done on panels. The studio is very popular and surely its success is deserved.



The Guild of Arts and Crafts of New York, have just issued their circular for the coming season. Among the teachers we find the familiar names of Amy Mali Hicks, design; Dr. and Mrs. Busck, leather and metal work; Emily F. Peacock, enameling on metal; Mary Alley Neal, water color, and Mary White, basketry.

TREATMENT FOR MARIPOSA LILY

Mrs. E. L. Hubbert

THE dark flowers are light violet and are painted with Banding Blue and Ruby with centers of Brown Green, deep touches of Ruby around edges of center. Stamens a greenish yellow. The white flowers have the same centers and are shaded with Copenhagen Blue and Brown Green. Leaves of Brown, Yellow and Black Greens.



PEONIES (September Supplement)

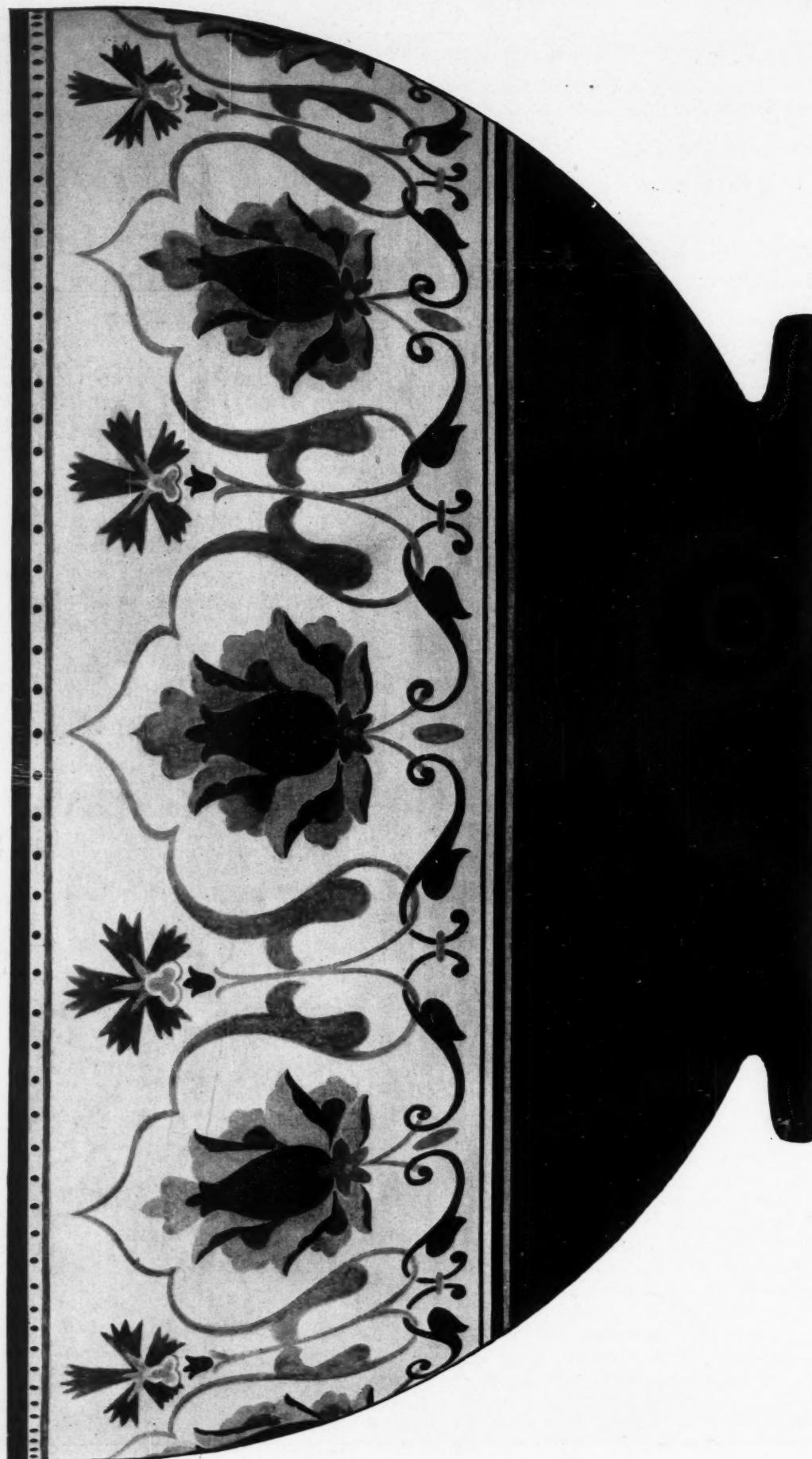
TREATMENT IN WATER COLORS

Rhoda Holmes Nicholls

ONE of the charms of this study is the beautiful adjustment of color, the greys of the background balancing the warm tints of the flowers. The student should not slight the drawing, which although nearly obliterated in parts, is most suggestive and characteristic. The center of the peonies is Carmine floated in wet with a proper proportion of Rose Madder and Cobalt towards the edges, with a clean bristle brush model the inside petals by removing the color and as it begins to dry add the outlining of the petals. For the leaves use Hooker's Green No. 2, broken with Burnt Sienna and Anbucy's Blue. The shadow tones of the pink peonies are made with Burnt Sienna added to the Rose Madder. For the background use Cobalt Blue, Lemon Yellow and Rose Madder broken in. Then review the whole, strengthening the accents of dark and picking out the lights, being careful not to exaggerate either. To have a successful study keep the paper damp, the best means of doing this is to have wet blotting paper underneath.



POTTERY WORK FROM MRS. PHILLIPS' STUDIO.



BOWL—ETHEL H. LARTER

The black portion of this design is a dark grey blue, the lighter ground being a light tone of the same, the medium tone is a dull red. The entire design is outlined in gold.

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SIMPLE FURNITURE

III—CONSTRUCTION

Elisabeth Saugstad



AVING considered in the last chapters, some of the laws and limitations of wood, and structure from the utilitarian and aesthetic point of view, we can turn to the more purely technical side of the subject. Wood is practically a straight grained material of a fibrous nature, splitting more readily in the line of the grain. Consequently any form of construction which cuts across it in any part which bears a strain must materially weaken it, as in "bandy" legs, except in a very modified form. Therefore all parts should have the grain continuous from end to end, and in casework, especially, there should be members running the height, width and depth of the article.

Strains of compression should come on end wood, as legs of tables; and bending strains crosswise, as in drawers, chests or boxes.

Wood shrinks in width, not length, and this must be allowed for in roughing out pieces and provision made for it in the construction of panels, drawers, tops and all broad surfaces.

Furniture is divided into two groups, framework and casework. The first includes tables, chairs, beds, etc.; and the second all pieces cased or boxed in by panels, or otherwise.

The joints commonly used in the construction of either kind may be divided into three groups: butt, angle and framing joints.

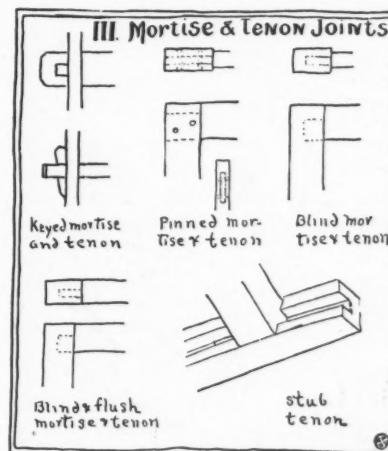
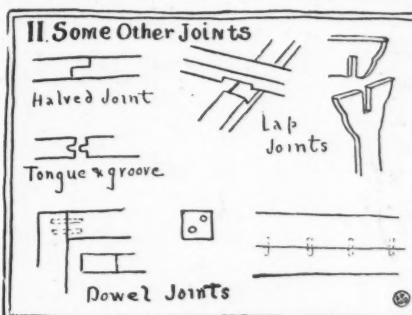
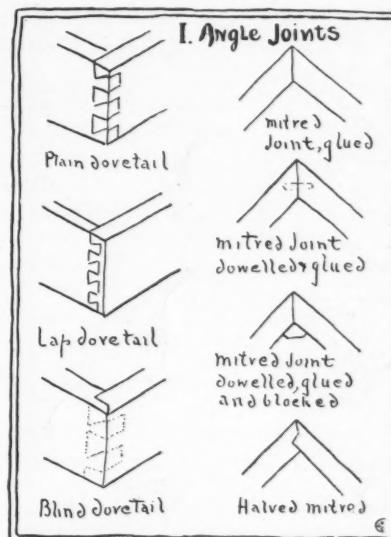
A butt joint is the fastening together of two pieces of wood on the same plane, as the boards of a table top. For such use it is strong, even when only glued, and practically invisible when the grain is parallel or carefully chosen to compose well. Blocks may be glued to the unexposed side for extra strength, having their grain parallel with the top so that shrinkage will be in the same direction. Or dowels may be inserted at intervals of from 6 to 10 inches. But in any case, the adjoining edges must be so perfectly true the whole length that no glimpse of light may be seen between them when one is rested on the other. Improperly fitted or twisted pieces forced together by means of clamps are almost sure to split later.

The mitred and dovetailed joints in Ill. I, and halved, tongue and groove and lap joints in Ill. II, do not need further explanation.

The mortise and tenon joint is an old and thoroughly good one, with several variations. The keyed mortise and tenon in Ill. III, is much used, and often without the slightest discrimination, on so much of the co-called "Arts and Crafts" furniture. It is supposed by many to represent the ideal of honesty and strength in construction. It may be used with picturesque effect on furniture of a very simple, unpretentious or primitive style, as a decorative feature, or to relieve surfaces that might otherwise be too bald. It is not, however, as good and strong a joint as some others for pieces which must be often moved, as the keys work loose; but it is perfectly satisfactory for pieces more or less stationary, as tables, desks or bookcases and built-in furniture.

The pegged mortise and tenon is also a good deal used and it is a good, strong joint; but the blind mortise and tenon is quite as good as either of the foregoing, and for the cabinet maker, usually better.

Each joint is good for some place and purpose which is determined by reason and common sense.



There has been much discussion concerning the relative merits of the mortise and tenon and dowelled joints, but in spite of some sentiment in favor of the former, which is so old and honorable, I have never heard a convincing argument against the dowel, properly used. It is very generally used; it

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is much more easily and quickly made and in most cases I believe it to be as strong, and sometimes stronger.

Dowel wood, which can be bought at hardware stores, comes in round sticks about 3 feet long and from 3-16 of an inch to an inch in diameter. It costs about a cent a stick.

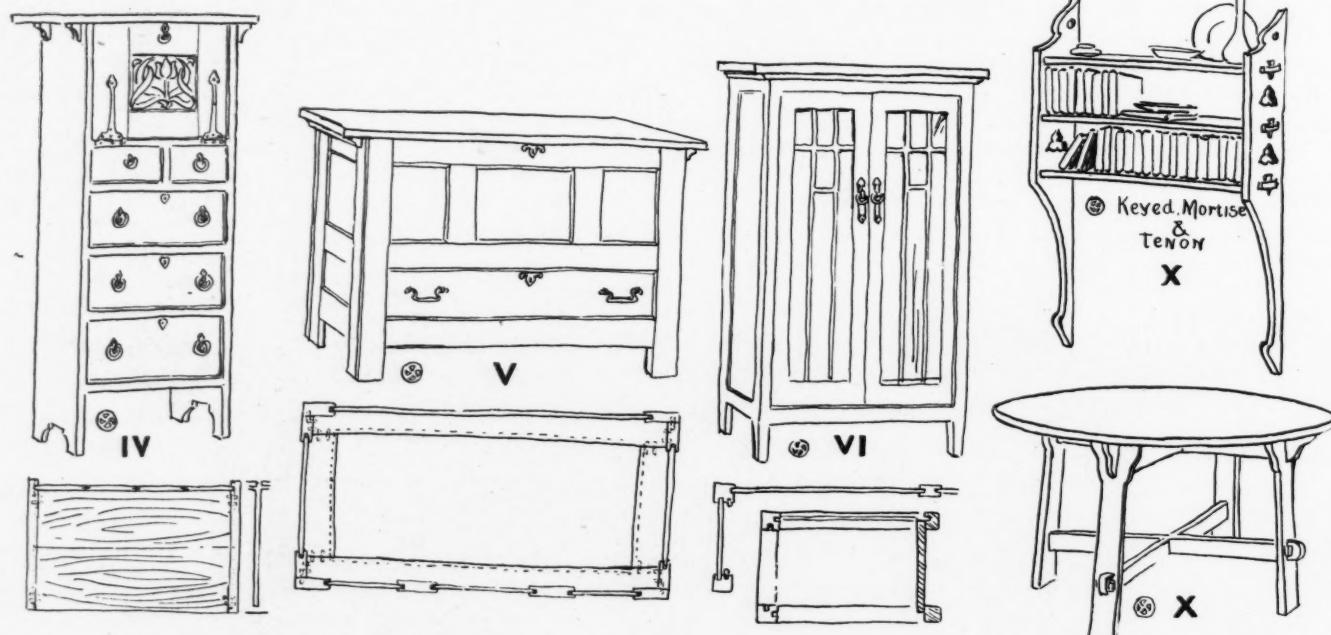
The pieces to be joined by dowels are made to fit perfectly, usually a plain butt joint, and corresponding holes are bored in them with a bit of the size of the dowel wood to be used. Dust and bits of wood are cleaned out of the holes and glue worked in them and on the faces of the pieces. The dowels are cut to a fraction less than the combined depth of the holes; the ends are trimmed by running around them with a sharp knife or bit of sandpaper. They are then inserted in one side and the other piece forced down on them and clamped together until dry.

There is a tendency among some craftsmen to look on the use of glue as objectionable and the resort of only the lazy or unskilled workman. This is not true, as it is a perfectly legitimate method of joining wood, provided the reasonable rules of construction are regarded. Two boards properly glued are more apt to split on the grain than where they are joined;

comes to be an eyesore and perpetual reproach. The whole article, unless small and simple, need not be put together at once, but, for instance, the back and front of a chair would be made separately and then joined together by the side rails and braces. The pieces should stay in the clamps until the glue is thoroughly dry, several hours or more. A dry day is best for glueing.

Another means of securing lightness with strength in construction, is by glueing blocks on the inside, as in corners or wherever it seems best to reinforce the structure.

In casework with panels, the uprights and rails may be joined together with mortise and tenon, dowels or tongue and groove as seems best in each case. A groove is run in the upright and rail for the panel, which should be able to work freely in it. It should be fastened in the center of the ends, so that shrinkage and expansion may be from that point and not from one edge to another. It should be about $\frac{1}{2}$ of an inch smaller than the place allowed for it, so it will have room to expand without bulging in damp weather. If the piece is to be stained, the panel should be colored before it is put in, otherwise there will be a light line if it shrinks.



Ills. IV, V and VI shows some ways of framing casework. Ill. VII shows some ways of setting shelves.

No. IV is a chiffonier of the simplest construction, the method being shown in the diagram. The partitions between the drawers are set in grooves and dowelled, the back is joined by dowels and run in grooves in the sides and fastened only at the top and bottom.

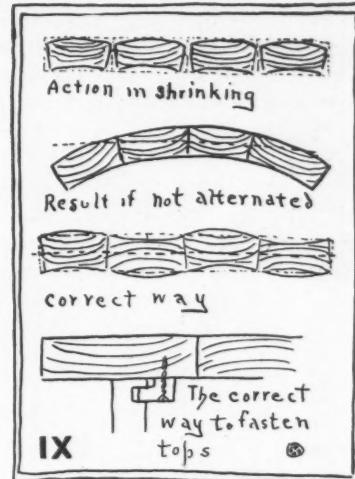
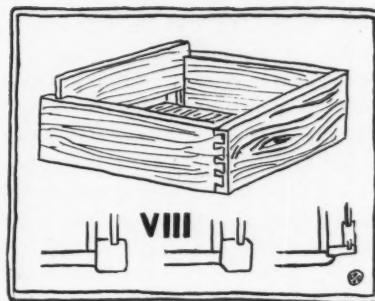
No. V is a chest with one drawer. The plan of it shows the method of building up corners where it is not desirable to have them solid. It is all dowelled together and the panels run in grooves.

No. VI might be a bookcase, a china closet or cabinet. The lower plan shows how it is framed with mortise and tenon joints and solid posts, and section of the bottom showing how it forms a stop for the doors. The other plan shows the framing of the panels in the side and back.

Ills. X and XI show an appropriate use of the keyed mortise and tenon, and, in the latter, the lap joint.

Ill. VIII shows how drawers are framed, the proper direction of the grain and several ways of setting them in the frame.

All joints must be perfectly fitted in every part so there shall be no strain or twisting of one piece from another when the whole is clamped together. The pieces should be warm and the glue applied warm, and worked well into dowel holes and mortise and spread evenly on dowels, tenons and all surfaces that come together, and it should be done as rapidly and neatly as possible. The pieces are then put together and drawn tightly with clamps, small blocks of wood being placed between them and work so it shall not be marred or dented. When it is necessary to bring close fitting joints together with a mallet, a piece of wood should be held against the surface to be forced, as it is almost impossible to get a dent out, and by far the best way is not to get one in. Every slip or carelessness of any kind

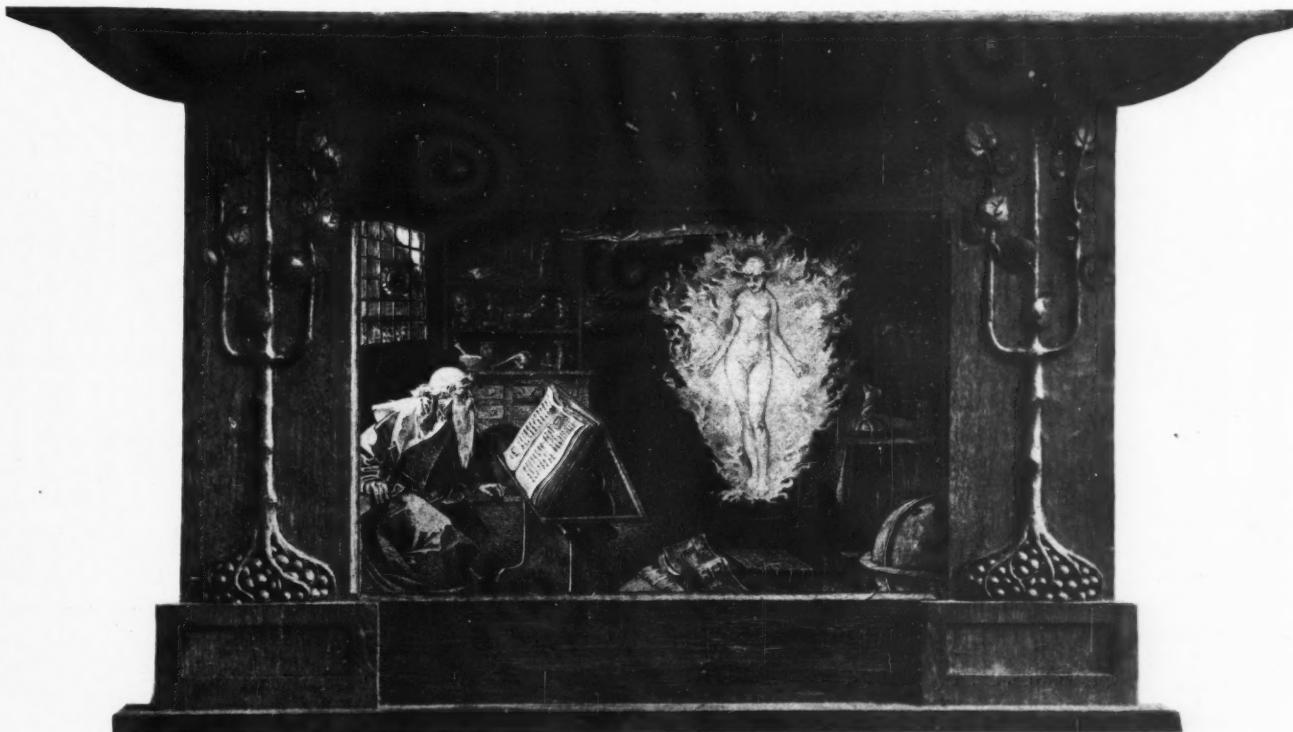


The bottom should be grooved only in the front groove. After they are fitted to their places, guiding strips, preferably of hard wood, are glued to the inside ledges; or in the case of a long drawer, it is better to put a hardwood runner on the middle of the bottom to run in a groove in the frame beneath.

In making tops for any piece of furniture it is not advisable to use boards more than 8 inches wide on account of the curving in shrinking of which I spoke in the last chapter. It is customary to alternate a heart side with a sap side so that the

curving will alternate and be more easily reduced because the general direction is the same. The diagram, Ill. IX is exaggerated to show the principle more clearly.

A top should not be screwed or fastened on tight at any point but the center of the ends, else it will either split, break the fastenings or draw the frame as it shrinks and expands. The best way is to fasten blocks at intervals to the top, each one having a tongue which runs freely in a groove in the frame as in Ill. VIII, thus it is held flat, securely in place but with perfect freedom.



FAUST AND THE FIRE SPIRIT—FREDERICK A. RHEAD

Design for Fire Place in pen and ink. Frame designed by Frederick A. Rhead and executed by F. C. Schmidt. Exhibited at Clarion Handicraft Exhibition, Chester, Eng.



PYROGRAPHY DESIGN FOR TRAY—OLIVE SHERMAN

PYROGRAPHY

TREATMENT OF TRAY

Katherin Livermore

BURN outlines; make a decided contrast between the inner and outer backgrounds; keeping the inner one very delicate rather than using the heavy lines indicated—a point stippling would be preferable. The outer one may be burned as heavy as indicated.

Use gamboge to color the flowers and Sap Green for the leaves—put a flat wash on and when perfectly dry, shade the flowers and leaves very delicately with the hot point, using line shading; the effect of the burning over the color is very harmonious, but can only be done when water color is used.

ANSWERS TO CORRESPONDENTS

Mrs. G. F. W.—White wash or slackened lime reduced to the consistency of milk is applied with a large whitewash brush to the kiln.

Mrs. W. E. McA.—To use raised paste for gold mix the powder with just enough fat oil to hold it together, breathe on it (not blow) several times, mixing afterward with a horn palette knife. This gives a little moisture to keep the paste from drying too quickly, then add enough oil of lavender to make just a little thin, breathe on it and mix it until when you turn it over with the palette knife it stays "put." It is then ready to use; if it grows thinner with using and flats out, breathe again on it and turn it over till right; if it grows too thick, thin with more lavender and breathe on it till of right consistency.

Mrs. E. N.—A color that is dusted on is usually too heavy to take gold well, it is always the best practice to take out the color where the gold is to be used, with a fine pointed stick before firing. Then the fluxed gold can be used; a wet tint has not so much body as a dusted color and the unfluxed gold can be used to advantage over it without taking out the design. Why not try another make of gold and see if that will make a difference.

A. McG.—It is difficult to say just what was the trouble with your char-

coal kiln. We should imagine that in some way the draft was checked and gas or smoke entered the kiln—this would account for the whitewash being black. Possibly some of the other trouble might be due to accidents in painting and some to the firing—if yellow disappeared, also pink in enamel, rose turned blueish, carnation a dirty color, the cause might either be an over-fire or some thing, color or dirt, getting into the painting from a brush not carefully cleaned or otherwise, but if ruby purple turned brown, it was either under fired or mixed with other color unless as before stated, all was due to gas in kiln. We can only suggest seeing that the draft is good and the kiln well warmed up before firing.

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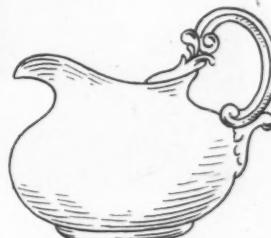
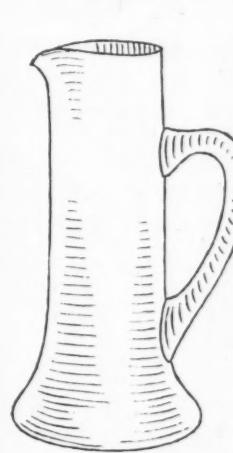
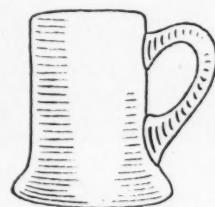
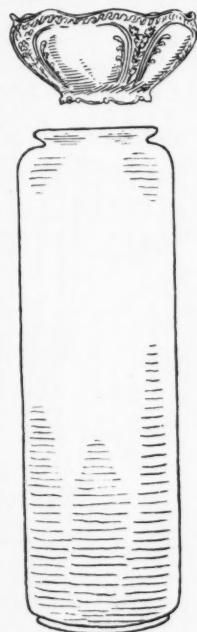
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